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APICULTURAL NEWS ITEMS.

EDITORIAL AND SELECTED.

C. Weeks, Clifton, Tenn., has sent us his spring Price-List of queens, bees, etc.

Chaff Packing.—"Cyula Linswik" has again wintered her entire apiary (61 colonies) without loss. They were packed on the summer stands.

An Exchange remarks thus: "The rules say: Spring is the best time to move bees. If, however, one settles on your neck in midsummer, you need not wait until next spring before moving it." You had better not be too anxious to remove it; you may wish you had let it fly away of its own accord. Sometimes it "leaves a sting behind."

Fine Work.—We have several samples of "dovetailed sections" from Dr. G. L. Tinker. They are made of white poplar, and sawed at the rate of one-hundred per minute, or 60,000 pieces in a day. If such "rapid sawing" and "fine work" have before been accomplished, we have not heard of it. They show superb workmanship and make a fine appearance.

How to Propagate and Grow Fruit, by Charles A. Green, contains over 50 illustrations and two colored fruit plates. A 64-page book, price 50 cents, telling how to propagate and multiply strawberries, raspberries, blackberries, currants, gooseberries, grapes, quince, peach, apricot, plum, cherry, pear and apple. It tells how to lay out a garden or fruit farm—how to plant, cultivate, trim, etc. For sale at this office.

Humble Bees are being exported to New Zealand, in order to fertilize the red clover there. A correspondent in the *Scientific American* remarks: "This is not the first shipment of bumble bees; the same experiment was tried with Australia some years since, and with success. It is a fact that without the bumble bee, in two years we would be without clover—one of the best fertilizers known to agriculture. Few bumble bees live over the winter, and their number is not sufficient to fertilize the first growth of clover, as not more than 5 per cent. of the first crop has seed; but by the time the second crop comes on, the bees have increased, and as a consequence we get seed, with sappling clover.

Lost 50 Colonies.—The Flint *Globe* remarks as follows: "W. Z. Hutchinson, of Rogersville, lost about 50 colonies of choice bees during the late winter, leaving him about 25 colonies. He has already ordered enough to increase his stock to about 90 colonies. Mr. Hutchinson believes the honey market will be active and prices good, owing to the enormous losses during the past season, and hence he does not hesitate to reinvest."

Apis Dorsata, says the *L'Apicoltore* of Italy, is not so much to be dreaded, after all. It is not more aggressive than the Italian bee. The editor adds: "A learned naturalist traveller will publish a description of the bees of India, which will rectify many errors chiefly concerning the *Apis dorsata*, which has certainly been mistaken for some large wasp of that country. The *Apis dorsata* is not any more aggressive than our Italian bee. The specimens which he has sent to the Museum of the Apicultural Society of Milan, especially the males, are very fine; all the body is of a clear yellow, including the antennæ; the head and the eyes are white."

C. H. Dibbern, in the *Western Plowman*, remarks thus: "The foolish story started by Prof. Wiley as a 'scientific pleasantry,' that honey-comb was now made in Chicago by machinery, filled with glucose and neatly sealed up by passing a hot iron over it, and sold for 'pure honey,' has long been exploded; but is still being persistently repeated. Those of us who have ever made a pound of foundation know how utterly impossible it would be to accomplish this feat. If it could be done it would not resemble comb honey, and could not be used to deceive the most unwary. Comb honey never can be successfully imitated by any scientific methods."

Bee-Keepers in Germany.—From September 9 to 15, the annual meeting of the Austro-German Central Bee-Keepers' Association, will bring together 400 to 500 members. Mr. Lehzen, of Hanover, enumerates the associations in Germany and the number of members in each one, as follows: "Central of Gumbinen, 488; Circle of Siegen, 500; Baltic Central (in Pomerania), 950; Central of the Province of Hanover, 1,300; Central of the Marches, 900; Central of Schleswig-Holstein, 400; Seven United Associations of two Hesses, etc., 1,200; Central of the Great Duchy of Saxe-Weimar and neighboring country, 380; Central of the Provinces of Saxony, Thuringe, and States of the Grand Duke of Anhalt, 1,200; Central of Mechlemburg, 600; Central of Bromberg, 500; Baden, 1,700; Cammin, 3,500; General of Silesia, 2,242; The German Club of Frankfort upon Main, 2,242. Total, 16 principal groups, numbering 15,880 members—all readers of progressive periodical publications." How do these figures appear when contrasted with American bee-keepers? We have many more apiarists than Germany, and yet not a quarter of them pursue progressive methods, read a bee-paper, or attend bee-keepers' conventions. We have the territory, the flora, and the bees, but the *bee-killers* here outnumber the practical and progressive, and when they do not kill the bees by their mismanagement, they ruin the honey markets by their ignorance and indiscretion.

The White Sulphur Springs, situated in Frederick County, Virginia, is a summer resort conducted by Mr. E. C. Jordan, one of the most enthusiastic bee-keepers of Virginia, and is open from June 1st to Oct. 15. We have received several pamphlets setting forth the value of the use of those mineral waters. If any one desires to obtain a copy of it, they may be obtained at this office, or of Mr. Jordan, at Stephenson's Depot, Va. Honey is abundantly supplied on the tables for guests.

Bees and Peaches.—A correspondent in the *London Garden*, from Wales, remarks as follows: "I know of no better way of securing a heavy crop of peaches and nectarines, than by putting a colony of bees in the house when the trees are in bloom. This has been my practice for several years past in the case of a house in which the trees come into flower in March, and the result is always satisfactory. When the bees are in the house, we never brush the flowers or shake the trees in the hope of fertilizing the flowers; this work is left entirely to the bees, and they do it effectually. I have thinned 900 small nectarines from a tree which covers a piece of trellis 4 yards square, and several hundred more will have to be taken off before the crop is a safe and ordinary one. This, I think, is proof enough as to the advantags of employing bees, and those who think such work does the bees harm make a great mistake, as they thus get a supply of food before it is plentiful out-of-doors; and I have noted that I have for 2 years secured my first swarm and earliest-filled sections from the peach-house bees. I may add that I have a good many colonies of bees, and in my opinion they are useful in a garden at this season, and when managed on the movable-frame system, they are both interesting and profitable."

Wild Bees in Oregon.—The Portland *News* mentions the following incident: "A short time ago Samuel, Asa, and Joe Holaday, of Scappoose, took a trip over to the Lewiston river, in order to look into the resources of that region. They found it a most beautiful country, and one that offers many inducements to settlers. The part visited lies off in the direction of Mount St. Helena, and is composed of both timber land and fine open tracts which abound in game, large and small. While encamped on the river, they discovered an object that was as novel and interesting as it was beautiful and striking. In their rambles through the pine woods, they suddenly came upon a fallen tree across the path which, on inspection, they found to be hollow. Through a knot-hole they could see something white, and at once began to investigate. They sawed into the log and were surprised to find that the whole interior of the log was filled solidly with honey. They at once brought from their camp some of their vessels to fill with this sweetest of all nature's productions. Their buckets and pans were soon filled. Then they sawed off another length of the log, and found it still solid with the honey. This they repeated and took from it honey until they had opened up 10 feet of pure, lovely honey, which yielded a comb that was in many places 4 inches thick. Of this find they carried away 180 pounds, which they declared was the finest they ever tasted, being far richer than the tame honey which they produce."

QUERIES

WITH

REPLIES by Prominent Apiarists.

Prevention of After-Swarms.

Query, No. 67.—Briefly stated, what is the best method of preventing after-swarms?—J. L. A.

G. W. DEMAREE remarks thus: "Put the hive containing the new swarm on the old stand; move the old hive to a new location, and supply the exhausted colony with a virgin queen at least one day old. If the young queen is a lively, smart one, she will take care to destroy all queen-cells."

DADANT & SON answer as follows: "The best prevention of after-swarms is to prevent swarming."

PROF. A. J. COOK answers thus: "Cutting out all queen-cells but one answers well. Mr. Heddon's plan is also good."

W. Z. HUTCHINSON remarks thus: "I prefer the Heddon method."

G. M. DOOLITTLE answers: "Wait 8 days after the prime swarm has issued, at which time (as a rule) the first young queen will be hatched. Now cut off all queen-cells and you have a sure thing of it. In finding a queen-cell open at the end, you have the assurance that one queen is at liberty."

JAMES HEDDON remarks thus: "My plan, as given on page 458 of the BEE JOURNAL for 1884, is as follows: Let us suppose that colony No. 14 swarms June 14. With a non-erasive crayon we mark upon the hive, O, June 14, and on the hive in which we put the swarm, S, June 14. Thus, we distinguish the old colony from the swarm at a glance, as we make these marks in large figures. When we hive the swarm (always on full sheets of wired foundation), we place it close on the north side (our hives front the east) of the old colony, with the entrance turned northward, away from the old colony, about 45°. As soon as the swarm is well at work, having their location well marked (say two days), we turn the hive around parallel with the old colony. Now both hives face east, setting side by side, and close together. Sometimes, however, being governed according to the size of the swarm, as compared to the number of bees left in the parent colony, we place the newly-hived swarm on the old stand, putting the old colony through the process above described. In fact, we do this most of the time. Now, you will remember, that while each colony recognizes its individual house, they are, at the same time, as regards all other colonies in the yard, practically in one location, or on one stand. Now, the dates on the back ends of the hives plainly indicate that second swarming will take place in about 8 days. In about 6 or 7 days (according to the season or weather) after this date on the hives, we remove the old colony to a new location. As we do this at such time of day as most bees are in the field, this depopulates the old colony, giving the force to the new, leaving too few bees for the young misses to divide, and as they at once recognize this fact, they fight it out on the line of the 'survival of the fittest.' It may be proper, just here, to say a few words regarding how we manipulate the surplus departments of these two hives, as it may have something to do with the object in view. Let us suppose that, at the time of swarming, that the old colony was working in three 28 one-pound section-cases. Suppose the upper one to be ¾ completed, the middle one about ½, the lower one just started. We will put two (which two, only the minor circumstances in the case can decide) on the swarm when first hived, leaving one, and, sometimes, we get another to put with it, on the old hive. Perhaps this surplus room on the old colony also has a tendency to prevent swarming."

Bees Moving in the Cluster.

Query, No. 68.—Do bees ever move from the outside to the inside of the cluster, and vice versa, to get food, after they have once clustered for winter?—W. M.

MESSRS. DADANT & SON reply: "They do not move, but they give honey to one another; *i. e.*, the bees which are near the honey give to those under them, and they pass honey this way to the last bees of the cluster."

G. W. DEMAREE says: "I have never at any time examined bees without seeing evidence of change of position of individual bees in the cluster; but I do not think that this is necessary to obtain food. The food is evidently 'handed around' by the bees."

PROF. A. J. COOK answers thus: "They are constantly on the move."

G. M. DOOLITTLE replies: "Some seem to suppose they do, but from careful watching I have failed to find anything which would warrant my coming to such a conclusion."

JAMES HEDDON remarks as follows: "I am not positive about that, as I have never investigated the matter, but it is claimed that they do, and the claim is a reasonable one. They must either do this or feed one another."

Convention Notices.

☞ The Bee-Keepers' Association of Central Illinois will meet at Bloomington, Ills., on July 15, 1885, at 10 a. m.

WM. B. LAWRENCE, Sec.

☞ The Mahoning Valley Bee-Keepers' Association, will hold its next meeting at Newton Falls, Ohio, on Thursday, June 5, 1885. E. W. TURNER, Sec.

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend. E. J. HADLEY, Sec.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 25, 1885.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Demand is light and receipts are also light. Prices range from 10@15c. for best grades of comb honey, and for extracted, 5@7c.

BEESWAX.—Best grade weak at 28c.

R. A. BURNETT, 161 South Water St.

BOSTON.

HONEY.—We quote the following prices: Fancy white comb in 1-lb. sections, 16@18c.; the same in 2-lb. sections, 15@16c; fancy white California 2-lbs., 12@14c. Extracted weak, 6@8c. Sales very slow.

BEESWAX.—32 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

NEW YORK.

HONEY—Present sales of comb honey are very slow, and owing to the lateness of the season, we do not anticipate any change in prices until the new crop commences to arrive. We quote at present as follows: Fancy white clover in 1-lb. sections, 14@15c; fair to good white clover in 1-lb. sections, 12@13c; fancy white clover in 2-lb. sections, 13@14c; fair to good white clover in 2-lb. sections, 11@12c; fancy buckwheat in 1-lb. sections, 9@10c; fancy buckwheat in 2-lb. sections, 7@8c. Ordinary grades, no sale. Extracted white clover, 7@8c; extracted buckwheat, 6@6½c.

BEESWAX—Prime yellow, 32@33c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

CINCINNATI.

HONEY—There is no new feature in the market. Our regular customers only are buyers at present. There is almost no outside demand, and low figures are no inducement. We quote extracted honey from 5@8c on arrival, and comb at 9@12c.

BEESWAX—Good demand and arrivals plentiful. We quote 24@28c for good yellow on arrival.

C. F. MUTH, Freeman & Central Ave.

SAN FRANCISCO.

HONEY—Market very quiet. Choice extracted is the only kind which buyers at present care to purchase in a wholesale way, and there is little of this sort offering. No new crop honey has yet arrived; none expected for several weeks. White to extra white comb, 8@9c; dark to good, 4@7c; extracted, choice to extra white, 4½@5½c; amber colored, 4½@4¾c.

BEESWAX—Quotable at 25@62c—wholesale.

O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 5½@6c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street

CLEVELAND.

HONEY—Since our last report there has been a little better demand for honey, and some sales have been made at 13½@14c for best white honey in 1-lb. sections. Second quality is still very dull at 12@13c. Extracted is not salable at any price in our market.

BEESWAX.—Scarce at 28@30.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY—Demand for choice white comb in ½, 1 and 2-lb. sections is good, and prices fairly maintained. Half pound sections, 15@16c; 1-lb., 13@14c; 2-lb., 10@11c. Extracted slow at 5@7c. We could sell some ½-lb. sections of comb honey and a few more nice white 1-lb. sections.

BEESWAX—25@30c., according to quality.

CLEMONS, CLOON & CO., cor. 4th & Walnut.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections 13@14c; extracted, 6½c.

GEO. W. MEADE & CO., 213 Market.

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark ⊙ indicates that the apiarist is located near the centre of the State named: ♂ north of the centre; ♀ south; ♁ east; ♁ west; and this ♂ northeast; ♁ northwest; ♁ southeast; and ♀ southwest of the centre of the State mentioned.

For the American Bee Journal.

Beautiful Spring Time.

J. C. STODDARD.

Birthday of the seasons, welcome!
To me, three score and ten,
Thy happy charms revive us,
With the cheer of the twittering wren.
Vernal beauty reigns supreme,
Fragrance floats in every breeze,
Wavy zephyrs chant in chime
Their salute to all the trees.

Sunbeams glint on wavy ferns,
Piercing through the thickest shade,
Warming well the dark, cold pines,
Kissing the wild flowers of the glade.
Nature's hosts hold high parade—
The trumpeters are on the wing,
The oriole pours forth its joy,
And all the birds proclaim the spring.

Welcome the spring! thy sounding joy!
Welcome time of budding bowers,
Welcome are thy storms and shines
That usher in the reign of flowers.
Wild geese pipe their songs o'er head,
Their trombones are all in tune;
Arbutus flings his fragrance up,
A bouquet of sweet perfume.

The honey-bee, God's gift to man,
Is out in force each lovely day,
Kissing each sweet and lovely flower
Until the daylight dies away.
Pile it in! four pounds each day,
Dear little busy honey-bee!
So when you've got your house brimful
We'll share with you, and taste and see.

The frogs have held their breath so long,
Down in the mud so deep, poor things,—
A cheerful racket now they make,
They, too, would fly—had they the wings.
Maidens out in fields and dells;
Children shout with springlike tone,
Decked with flowers and sweet bouquets,
For Spring is queen upon her throne.

The dandelion's golden eyes
With seeds of downy feather,
Starring hills and pretty lawns
In summer's showery weather.
Little fishes in the frolicking brooks,
And sportive grassy glens,
And foaming waterfall—their Minnehaha—
Where aslant the shady elder bends.

Violets catch the dew-drops clear,
Daisies proud in silver frills,
Star flowers innocent and bright,
King-cups drink the dews of hills.
Spring hath wrought her wedding-veil,
For Summer hath engaged her—certain,
In Flora's beauty she's now decked,
Gracefully she retires behind the curtain.

—*Springfield, Mass.*

For the American Bee Journal.

What Causes Bee-Diarrhea?

16—G. M. DOOLITTLE, (40—80).

On page 246, under the above heading Mr. W. Z. Hutchinson writes and closes by saying that "perhaps it is a mistake in attempting to keep bees out of their native clime." In this sentence he gives just the cause of bee-diarrhea. His first proposition, "Bee-diarrhea is the result of an overloaded condition of the intestines," is certainly correct, and his last, as applying to the cause, is equally correct; while what he assigns as the cause cannot be correct, at least as it seems to me. The "native clime" gave bees the chance of flying every few days, thus preventing the "overloading of the intestines," and the thing which took this privilege of flying away from them is the cause of our Northern wintering trouble. In the language of Mr. H., I think that "the stupidity exhibited by some" regarding this confinement part of it "is truly amazing." I say (using Mr. H's words again), "let some one produce a case of bee-diarrhea without the use of"—confinement. It seems to me to be perfectly plain that bringing bees into our Northern latitude is the cause of all our trouble, and that all matters of food, ventilation, dampness, etc., are only secondary causes; for Mr. H. tells us that the reason why "bees in warm climates are free from diarrhea is because they can enjoy frequent flights;" hence the taking away of these frequent flights must be the cause.

On page 244, Mr. G. W. Demaree says, "The trouble is wholly incident to long, cold weather;" while Dr. Tinker says, on the same page, "When bee-keepers shall recognize the fact that cold is the prime cause of our winter losses, we shall get down to successful wintering, and not before." So, then, as the cause of diarrhea, we have first the bringing of bees from a warmer clime to a cold one; second, cold the cause of confinement; and third, confinement the cause of bee-diarrhea. Although Mr. H. says there can be confinement without diarrhea, I wish to put it on record as saying that if that confinement is long enough, every colony of bees thus confined will perish with diarrhea no matter what their food may be, providing they have enough so they do not starve.

To those who claim that the food has all to do with it, I wish to quote still farther from Mr. G. W. Demaree, where he says: "Of course many things may conspire to shorten or lengthen the struggle for existence. Bad food, damp, unwholesome quarters, weak constitution, etc., may make the struggle short, and the reverse of these may make the hanging on to life long and tedious. But the end will come if there is no return of the sunshine—no 'flash' of the 'wing' in the balmy air." Four years ago (after our great loss), I placed on record, in the BEE JOURNAL, a prophecy "that after every long, cold winter we should hear of great mortality of bees," and the reports of to-day but confirm that prophecy.

Now I wish to notice one other sentence in Mr. H's article, where he says, "It will be seen that there can be no diarrhea if there is no pollen." While Prof. Cook found, by the use of the microscope, a few grains of pollen in the bottom of the cells of the piece of comb which I sent him (as I gave on page 197), still it will be remembered that not one bee in five, which had the diarrhea so badly as to foul and besmear the hive and combs, had any pollen in its intestines. Since that colony died, I have also lost 3 more with diarrhea, which had only sugar syrup for stores; at least that was all I could detect by a careful examination last fall. Prof. Cook's finding pollen grains under the syrup, a few in each cell, only shows that there is sticking to the combs which all would pronounce absolutely clean, a little pollen. It also proves to a certainty that no experiment can be conducted by which no pollen can enter into it, except by shutting up the bees, after which they are to be given sheets of foundation and fed sugar syrup. Hence, I say that I have proven that bees can have the diarrhea and die with it, where they *practically* have no pollen, and that with 4 different colonies—2 wintered in the cellar and 2 on the summer stands.

Dr. A. B. Mason (on page 249), wants all who have honestly tried to winter bees with sugar syrup and no pollen and have failed, to give the minutia of the experiment; in this article and the one on page 197, he will find one who has failed; who, if I know my own motives, tried honestly, because I certainly would not have taken all the pains I did to kill some of my best colonies, say nothing of my most valued queens.

Again, Mr. W. N. Howard, on page 261, reviews my article on page 197, and after making some wrong conclusions, which could not be deduced from my article, says: "How the facts of this case can annihilate the pollen theory, I cannot see;" but he forgot to add that I said it was the practical part that was annihilated. The theory is of no value only as it can be made practical by the yearly use of it by the bee-keepers of the United States. The reasons why it cannot be made practical are these: 1. The author of the theory claims that there can be enough floating pollen in the honey to cause the bees to have the diarrhea. This makes it impractical to the majority of bee-keepers, for whatever else may be said, the bee-keepers of the United States are not going to take away all stores of honey and replace it with stores of sugar. 2. By the latest reasoning on this theory, it would seem that if ½-dozen cells of pollen should happen to be left in a hive, the bees would be liable to get the diarrhea and perish, even from that small amount, say nothing of bees perishing by the disease where the amount was so small that it took the microscope to discover the few pollen grains in the cells under the honey. Hence it is not practical to the masses, for few of us have the time to look thus closely for pollen. 3. All of our most practical bee-keepers tell us that the month of September is the time to prepare our bees for winter, which I claim to be correct. As bees in most localities can get pollen for several weeks later than this, it makes it (the theory) of no practical use on account of the bees being liable to get a taste of pollen after we have carefully excluded every bit, even using the

microscope. Prof. Cook thinks that, perhaps, the bees that I sent him, in whose intestines he found plenty of diseased excrement, but no pollen husks, might have collected meal late in the fall, which would act the same as pollen regarding brood-rearing and diarrhea. For these three reasons, if we would be sure no pollen or meal was in the hive, we must wait about our preparations for winter until it is so late in the season that the syrup fed could not be sealed over; in which case it would be worse than plenty of pollen.

I could give other reasons, but the above are abundantly sufficient to convince any candid mind that whatever else is said of the pollen theory, it is annihilated as far as practicability is concerned.

Borodino, ⊙ N. Y.

For the American Bee Journal.

Bee-Notes from Mississippi.

OSCAR F. BLEDSOE.

My experience gained during the past winter teaches me the valuable lesson that bees need shelter both for winter and summer here in the South --in winter, from the sudden changes and severe spells; in summer, from the extreme heat. Hence, I have erected sheds for my hives. They face south—the hives under them in two rows, one facing south the other north. The sheds are tall enough to enable me to walk under them—are covered with boards, and are open except that the north side has planks nailed on for three feet high beginning one foot from the ground.

Each shed holds 25 hives. My bees thus have all the protection they need in winter and summer. In summer, as the sun becomes perpendicular, the south-side hives have perfect protection from its heat, while enjoying its warmth in early spring. In winter, the space between the rows of hives is to be filled with straw or leaves—thus enabling the bees to economize food and heat, and come out stronger and swarm earlier in the spring. My bees suffered considerably during the past winter, a number of nuclei having perished, though no full colony failed to come out well.

Between the sheds described above, I plant peach trees and strawberry plants. The peach trees furnish some shade, though not enough to impede the flight of the bees. The strawberries are planted in checks—2 feet apart—and the ground is kept perfectly level and free from weeds by the use of a wheel garden-cultivator. The fruit produced pays me for keeping my grounds in perfect order. I enjoy looking around my apiary and beholding at the same time beautiful yellow Italian bees, fine Charles Downing or Wilson strawberry-plants and Chinese Cling or early Beatrice, or Early Hale peach-trees loaded with fruit. Is there any other pursuit that can conbine so much of the æsthetic in it as bee-culture, and at the same time the "utile cum dulce" to an equal extent?

Taking it all in all, I am encouraged in bee-culture here in the South, and propose to push it to as large results as I am capable of doing.

Grenada, ♁ Miss.

Honey Crops of California.

The following is taken from the last weekly bulletin of prices by Messrs. O. B. Smith & Co., of San Francisco, Calif., which will doubtless be interesting to many:

Number of cases received in this market during the past six years:

DATE.	1879	1880	1881	1882	1883	1884
January	1,640	295	1,758	176	605	88
February	2,419	22	989	68	393	167
March	1,273	128	334	420	34	144
April	943	44	771	684	200	250
May	398	737	121	213	287	254
June	232	2,952	202	639	631	690
July	32	2,808	662	1,053	948	2,047
August	110	4,883	833	2,613	2,151	4,009
September	115	7,027	1,428	3,592	3,177	6,887
October	261	3,322	1,661	2,750	2,446	10,208
November	711	2,160	998	1,068	1,253	5,140
December	308	2,404	901	1,183	1,679	4,381
Totals	8,442	26,782	10,656	14,489	13,804	34,265

Receipts in barrels and kegs for the past five years:

	Barrels.	Kegs.
1880	1,156	126
1881	456	84
1882	291	23
1883	3	2
1884	485	

Receipts from January 1st, 1885, to date: 10,664 cases and 45 barrels. Exports for the past 6 years by sea and land from San Francisco, and by rail from interior points have been:

	By Sea from San Francisco.		By Rail from S. F. and interior.
	Cases.	Pounds.	Pounds.
1879	13,675		214,216
1880	7,800	150,800	861,050
1881	8,849	62,700	378,370
1882	3,612		527,680
1883	6,663		266,400
1884	13,094	157,320	2,352,000

Of last year's shipments overland 1,033,640 lbs. were sent from San Francisco, 1,314,960 lbs. from Los Angeles, and 3,400 lbs. from Sacramento.

Exports for 1885 to date, by sea, 5,361 cases and 93 barrels from San Francisco; by rail, exclusive of shipments since March 1st, 474,700 lbs.

Since the first of June, last, receipts have been 44,206 cases, and 485 barrels. Allowing one-third of the cases to have been comb honey, we have the following showing in pounds:

	Pounds.
Extracted—29,351 cases	3,622,120
Extracted—485 barrels	174,600
Comb—14,675 cases	880,500
Shipped by rail from interior	1,641,450
Total	6,318,670

The above total does not include stocks consumed or still held in the interior, or shipments by sea from Southern coast points. These are unknown quantities, and presumably larger than ordinarily, on account of last season's heavy yield. There is knowledge, however, of over 4,000 cases being shipped direct by sea from the Southern coast. Assuming the unknown quantity the past season, to be no more than it was in 1883, last year's yield is shown to be 4,931,130 lbs. in excess of the preceding season, or nearly five times as large, and is believed to be the heaviest crop ever gathered in California, the only yield approaching it in volume being that of 1878.

Prices the past season have ruled low. The wholesale range on extracted may be stated as having been 3 and 5 cts. Some sales of common were made under 3 cts., and a little extra choice has been placed at a fraction over 5 cts. The main range of values on comb honey was 5 and 10 cts., although early in the season as high as 14 cts. was realized for some of very fancy quality. There is no way of arriving at stocks still on hand here and in the interior, but judging from the large quantity produced and the low prices which have been current, it is not unreasonable to presume that there is a considerable amount of last year's honey remaining in the State.

Advices as to the coming crop, although a little conflicting, in the main are to the effect that the yield will be light. Even though the amount of honey produced this season be unusually small, prospects are not encouraging for very high prices, as sugar is to-day lower than it has ever been, and other articles with which honey has to come into competition, are all abundant and cheap.

For the American Bee Journal.

Ventilation and Temperature.

WM. F. CLARKE.

The best thanks of all intelligent bee-keepers are justly due to Mr. Heddon for his article on "The Wintering Problem," on page 213, which I have read, re-read, and deeply studied with great interest. Nevertheless, I am obliged to confess that it has not converted me to what is now technically known as the "pollen theory." What a difference one's stand-point makes in looking at a subject! While Mr. Heddon is rejoicing over his article as a clear demonstration of his "pollen theory," here am I puffing away at the pipe of contentment over it, and saying to myself, "How completely it all dovetails in with the theory of hibernation!" And this, notwithstanding Mr. Heddon joins in chorus with Prof. Cook and Dr. Southwick, and oracularly declares, "Bees never hibernate!"

By the way, how is it that Mr. Heddon has been able to find out so fully the condition of his bees, and report it in time for the BEE JOURNAL for April 8? In the arctic region where I live, there has not been a day since November when bees could fly freely. Talk about bees doing well in a uniform temperature of 45°! The mercury has hardly once reached that point here, in the shade, all winter. Only twice has it gone beyond that figure, in the sun, since Jan 1. On both occasions, my bees came out, sniffed the outer air a little while, and beat a hasty retreat into their hives—those of them that could manage to get there. I had only 2 colonies to experiment with; one of them succumbed to the last cold spell in March—the other is alive, but in a bad condition with diarrhea, and will, no doubt, "spring dwindle" to nothing. In my anxiety to give plenty of ventilation, and not counting on so severe a winter, I overdid the air-sup-

ply, and before reading Mr. Heddon's article, I had made a memorandum in my note-book as follows: "Bees need but very little ventilation, if the air they get is *pure* and *uniform*."

Before Mr. H. laughs too loud and long at the audacity and absurdity of my claim that his conclusions fit in with the theory of hibernation, permit me to boil the whole thing down. He tells us that if bees are kept in the right temperature to induce that state of quietude which we all admit to be desirable, they will not eat pollen to any excess. They may possibly use a little for making chyme, but "they will not take bee-bread into their intestines." It is when the hive becomes so cold that they are obliged to stir around and get up heat by exercise, that there is waste of tissue which compels "the consumption of tissue-making food (nitrogenous food), bee-bread." It seems to me that this harmonizes exactly with my theory. I have said, over and over again, let us find out the temperature necessary to keep bees in that state of torpor or semi-torpor in which they will consume the minimum of food, and they will not contract diarrhea. I have supposed they might use a little pollen even in that condition, and Mr. Heddon seems to grant this in his allusion to chyme, also in the admission that various colonies had wintered fairly well, though they had taken some pollen. I said this in my essay, at the Rochester convention: "But whether honey or pollen, if they eat more than they can excrete without fouling the hive, diarrhea is the sure and fatal result." Mr. Heddon's experiments compel a modification of this. That large number of colonies which he reports as having died without any evidence of diarrhea, succumbed directly to the cold. There was no nitrogenous food to repair the tissue wasted by the exercise compelled to get up heat, so when their resources in this direction were exhausted, they were speedily killed by "cold, too long continued." I should say that they died from inability to hibernate. Mr. Heddon says what amounts to the same thing. It became so cold in the hives that they could not keep still; they were unable for any prolonged time to get up heat by exercise; hence, they gave up the ghost. This boiling-down of the main facts rather detracts from the scientific air of Mr. Heddon's narrative, but the essence of it is all there.

I and others who do not believe what is now so widely known as "the pollen theory," have maintained that excessive feeding during winter was the great cause of diarrhea, but we were unwilling to believe that pollen alone was in fault. Early in this controversy I held that if the conditions of safe wintering were right in other respects, the instinct of bees would be a safe guide—what food to eat, whether honey or pollen, and how much of it. Mr. Heddon now virtually takes this ground, and thereby upsets his theory. These are his words: "If colonies of bees are kept in a room whose temperature never goes below 45° (in some cases I might put it lower), *they will not take bee-bread into their intestines*, whether they use it for making chyme or not." One would naturally reply to this that it is only necessary to regulate the temperature, but Mr. Heddon knows very well that 45° has often been prescribed for the temperature of bee-houses and cellars; but notwithstanding this, diarrhea has often broken out in these repositories. To account for this fact, Mr. Heddon says: "If the honey which the hives contain, is of good wintering quality, that is, very free from floating pollen, this will be all the precaution necessary to insure safety. If, on the other hand, the oxygen stores contain a goodly quantity of nitrogen, *via* floating pollen in the honey, the bees may have the diarrhea, and this is the reason that disease has been experienced in warm cellars. If the pollen is diffused throughout the honey in considerable quantity, it will get into the bees' intestines and accumulate in larger quantities than the bees can hold, and their instincts to do this will cause the disease."

Most of the paragraph just quoted is mere supposition, and I must bluntly say that I do not believe it. I have more faith in natural instinct than to think that bees will eat pollen by accident. Surely they will not take it unless in some way an appetite is created for it. Granting for the moment Mr. Heddon's theory, and that the bees are not rendered hungry enough to need such strong food as pollen, will they not reject it? In taking the honey, must they also consume the pollen that floats in it?

Right here comes in the question as to the dry feces, and I do not hesitate to say that if Mr. Heddon and Prof. Cook will take the same pains with them as they have done with the wet feces, the "pollen theory" will get its *quietus*. It is undeniable that there is a dry, powdery substance deposited on the bottom-boards of hives during the winter confinement of bees. Following the lead of Father Quinby, I have maintained that this dry powder is excrement. Further, I have held that when bees void their feces in this dry state, it is one of the best evidences that they are wintering well. My experience this winter has confirmed this view. As long as my bees were able to keep in that quiet state which I have called hibernation, this dry deposit fell from between the combs; when the "cold long-continued" compelled exercise and feeding in excess, they got the diarrhea. I agree with most of what Mr. Heddon says about "cold, long continued."

Now I ask Mr. Heddon and Prof. Cook to tell us what this dry powdery deposit *is*. If it is not feces, it is rejected grains of pollen and other impurities which the bees found floating in the honey. Let Prof. Cook examine this dry powder with a microscope, and he will find that it largely consists of pollen. It is not pollen exclusively. What there is beside pollen, I have supposed to be the excremental remains of honey.

If this powdery matter is dry feces, then bees do eat pollen largely in confinement, without necessarily retaining the waste matter in their intestines till a chance offers for flight, or else become diseased, and then the trouble arises from their eating more and oftener than can be voided in a dry state, which is, of course, a slower process than that of voiding in a wet state. Accumulation of wet feces, will soon result in diarrhea.

If, on the other hand, this powdery stuff is not dry feces, but rejected pollen and other impurities found in the honey, it is proof that the instinct of the bees is a sufficient guide, what and how much to eat, unless they are forced by extreme cold to devour more food than can be retained in their intestines during long confinement.

Mr. Heddon can impale his pollen theory on either horn of the dilemma here presented, but one or the other will certainly be fatal to it. The whole problem resolves itself into a question of ventilation or temperature. Find the temperature in which bees will be so quiet and comfortable that they will not have to consume food, whether honey or pollen, in excess, and you have solved the difficulty without any need of picking pollen out of the cells with toothpicks, or preventing its being stored by that readier method which Mr. Heddon promises to disclose.

Speedside, Ont.

For the American Bee Journal.

Methods of Curing Foul Brood.

L. C. WHITING, M. D.

I want to say a word about foul brood. I would not give one cent for all the medicine in the world to be fed to a colony of foul-broody bees unless you take away all the combs and honey and give them a clean hive. If that is done, experience proves that it is not necessary. The plan adopted by Mr. D. A. Jones is successful, economical, and within the capacity of the average bee-keeper.

I do not believe that any man can rear queens from a foul-broody colony and make the price of the salt in his dinner. I should not want to use such queens; not from fear of foul brood, but for the lack of vitality in them. I do not believe that there is a bee-keeper in the United States mean enough to sell queens from such stock; but if they were caged on sugar candy, and free from foul-broody honey, experience would lead me to believe that there would be no disease developed from them.

Shake your bees into a box or hive, keep them two or three days shut up without food, then put them upon full frames of foundation in a clean hive, and they will be free from disease unless they get some of the old honey or contract the disease from some other colony. If the old hive, combs and honey are heated to the boiling point, all the germs will be destroyed.

East Saginaw, Mich.

For the American Bee Journal.

Alfalfa—California Honey-Plant.

W. A. PRYAL.

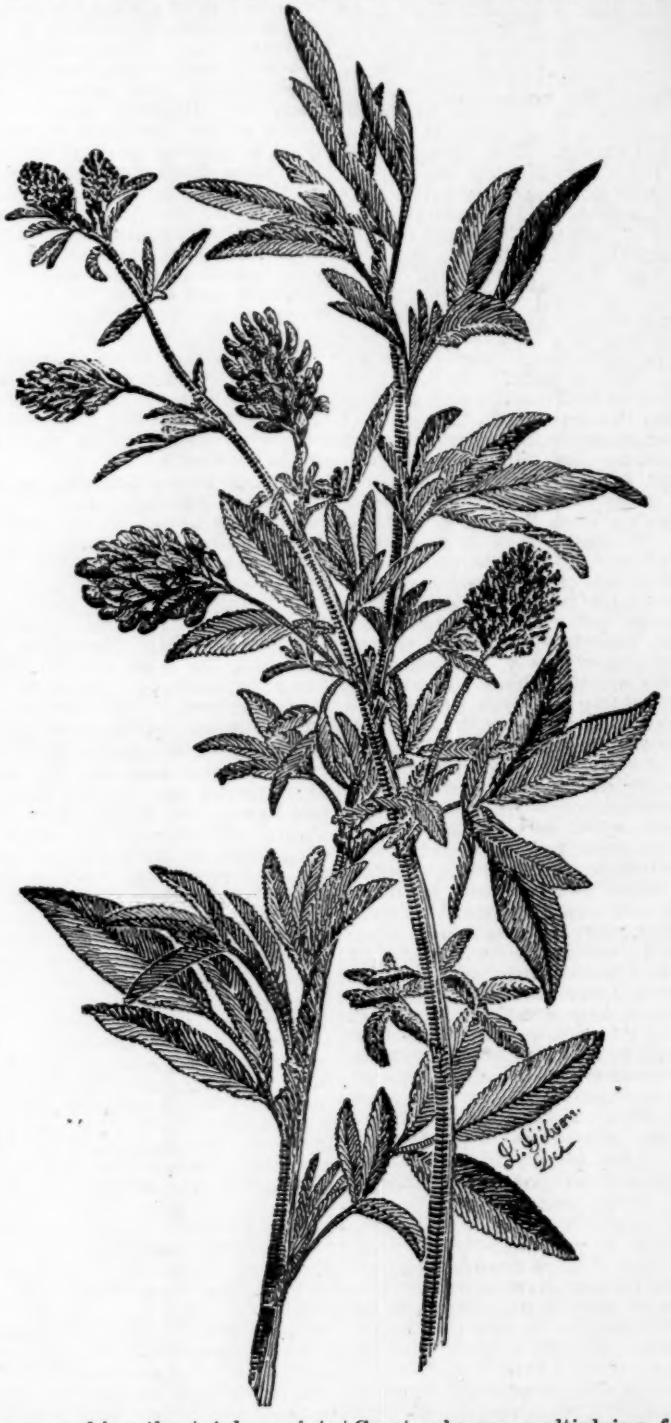
On page 51, reference is made to the above plant, and classes it, according to *Landreth's Rural Register*, as *Medicago sativa*. The illustration given heretofore was on such a small scale that but an imperfect idea could be formed of the flower. The sketch of this plant herewith shown was made in California from a natural flower, and can be relied upon as being a good illustration of the flower as it blooms in that State, and where it is a boon to the bees during a "dry year."

It is now many years since alfalfa was first introduced into the Pacific States, from Chili, where it has been cultivated for years. Thousand of acres of it are grown in the valleys of the Golden State, most of which is irrigated by artificial means, thus enabling the owners to cut as much as four or more good crops a year. The hay is considered very valuable for cattle and sheep. A considerable quantity of it is used at the cattle yards to feed the stock preparatory to killing. Swine, horses and sheep are also fond of it. Where the last crop is allowed to seed, the bees fairly hold a jubilee in the fields of blue flowers of this alfalfa. We have heard that in the lower central counties of California, where are to be found large tracts of it, the bee-keepers who have their bee-ranches located away up in the mountains, remove their colonies to the alfalfa regions. We have a case in mind where large yields were reported in the fall months from this source, but cannot now refer to the item. We should have been pleased to have quoted from this particular report, as it was remarkable, and would serve as an example of many more.

To show the readers of the BEE JOURNAL, who may be interested in this plant as pasturage for stock, we annex the following items:

Major Ketchum, of Stockton, Calif., stated to a representative of the *Pacific Rural Press*, in the fall of 1883, that he had about 20 acres of alfalfa on unirrigated land in San Joaquin county. He had kept on this alfalfa, which was sowed about March, 1878, from 75 to 100 head of hogs, 40 head of horned stock, and about 30 head of horses. The stock are turned into the field after the alfalfa has got a good start, and the field furnishes good feed until the grain [wheat in adjoining fields.—ED.] is cut—say the last of July or the first of August. "I find," said the Major, "no difficulty in getting a good stand, unless the spring is wet."

The next is that of an alfalfa farm run for the hay that can be cut for market purposes, and is the kind that gives the apiarist who chances to live nigh, a buoyant heart. It is situated in Bear River Valley, Yuba county, and consists of 140 acres, which was seeded five years ago. It is cut four times a year, and averages a little over 7 tons of cured hay to the acre. The hay is baled and sent to the mountains, and brings, when baled, $10 a ton. It nets about $7.50 per ton. This is something over $50 per acre for hay. In addition to this the owner estimates that the land yields him $6 per acre for spring and fall pasturage, making the total receipts of the whole crop, in the neighborhood of $56 per acre, or an income of about $8,000. The land is not irrigated nor fertilized. This sort of farming pays better than wheat-growing, where the whole winter is occupied in plowing and seeding, and the fall in harvesting; and after months of lobor and expense the toil-worn farmer finds that the bottom has fallen out of the wheat market. Not so with alfalfa; stock has to be raised to feed the people of the Pacific Coast, who are multiplying fast; the price of meat is going up rapidly, and the cattle-raiser is the coming millionaire. We say, "Go West young man" and raise alfalfa, cattle and honey, and be happy.



North Temescal, Calif.

For the American Bee Journal.

Building up Colonies—Swarming.

W. H. STEWART.

I believe that all bee-keepers are agreed that it is necessary to so manage each colony that the hive be well filled with bees by the time the honey-flow begins; and, also, that the colony be kept in that strong condition during the honey-gathering season.

It would not be a difficult matter for a skillful apiarist to work most of his colonies up to this condition, and to have them ready to secure the honey when it comes; but with most of us it is a difficult matter to maintain that condition, from the fact that just about that time the swarming-fever sets in; and although we may have the supers on, and the surplus work well started, young swarms are very liable to issue, and the parent colony thus becomes reduced in strength. It is for this reason that so many plans have been invented to prevent natural swarming. If I mistake not, all such plans have failed, and the bees swarm just about as often as they would if they were allowed to have their own way.

In this locality, the greater portion of our surplus honey is gathered from basswood, which comes in bloom early in July; that is also the time that the bees are in the height of their swarming. As an effort to prevent their swarming by any means yet discovered, is not only a failure, but attended with much extra labor, and consuming much valuable time just when one can least spare that time, I have, for the last two seasons, just allowed them to swarm, and at the same time so manage them that the parent colony is kept strong, and the storing of surplus goes right along as briskly as though no swarming had occurred.

I have not learned from the bee-books or papers, that any one is managing as I do, but in the reports of the many bee-conventions I read that Mr. A or B often asks the questions, "How shall we prevent our bees from swarming?" "How shall we prevent after-swarms?" My plan prevents after-swarms altogether.

When a colony is sufficiently strong, I put on the super, and put up one of the frames of brood from the brood-chamber; then place frames of comb or foundation on both sides of the comb of brood, and put a frame of foundation in the brood-chamber in place of the brood that I have carried above. The bees will commence work on the foundation given them below, and also in the surplus chamber, if honey is coming in. Thus far my management is not unlike that of some other bee-keepers.

When the bees are well started with their work in the upper story, I return the frame of brood to the brood-department, or if the frame of foundation given in its place is well drawn out, and eggs deposited in it, I give the frame to some weaker colony, which is thus rapidly built up to the required condition.

Now comes the swarming, and away goes most of the bees, taking the old queen with them, and what bees are left must care for the great amount of brood that is found in the brood-chamber; and as a matter of necessity, the work in the surplus apartment must be discontinued until a sufficient number of young bees can be matured to fill the places of those that made up the swarm. By this time the most of the honey-flow is past, and the parent colony is seldom found able to do more than provide for the coming winter; hence, many bee keepers remove the surplus department, cut out all queen-cells but one, to prevent after-swarms, and after the new colony has been at work a few days, give it to them, and look only for surplus from this new colony, which is not always sure to produce much, if any, from the fact that the best of the honey-flow may have passed before this new colony is ready to send a full force above.

To avoid this delay and liability of a failure to secure the entire honey-flow without the waste of an hour of time, I allow the swarm to issue, and when they are clustering, or after they have all clustered, I get them well clustered in my Shepard's hiving-box (as per Mr. Shepard's directions), then hang the box on the fence, a limb of a tree, or an empty hive will do, and then go to the parent colony, lift out and examine closely all the combs above and below, and destroy all the queen-cells except one or two on a single comb, place that comb with the adhering bees, in an empty hive, and give it also either two or three frames of empty combs or foundation. Now carry the old hive, with all the bees and combs, both upper and lower departments, with all combs except the one with the queen-cell, taken from them just as they were arranged before the swarm left it, place it in a new locality, and then hive the swarm in it.

The bees have now swarmed and are hived in a new locality, and in a few minutes are at work as earnestly, and apparently as well satisfied, as though they had been hived in an empty box. They have not lost an hour of time, and have lost only the few bees that have been taken with the single comb that contained the queen cell, and the few bees that were in the field at the time of swarming. This colony thus managed will continue the surplus work without abatement.

Now place the new hive containing the frame of brood and the queen-cell, on the old stand, and the returning bees from the field will, when united with those already on the frame of brood, be able to care for that amount of brood, and rear the young queen; and having so few bees, and a full sized hive, the colony will not attempt to cast an after-swarm, although there may be more than one queen hatched. The full colony in the new locality will not swarm again that season.

Having our bees thus arranged, we proceed with the work of extracting, and often find that a queen has deposited eggs in one or more combs in the upper department, and as these combs of brood are in the way, and as we do not wish to waste either the combs or brood, we take them to these newly made small colonies which we left on the old stands at the time of swarming, and thus we soon build up those weak colonies, which many times produce surplus fall honey, and they are found to be our best colonies when put into winter quarters.

Orion, ♀ Wis.

For the American Bee Journal.

Progressive Convention.

The Progressive Bee-Keepers' Association met in Bushnell, Ills., on May 7, 1885, with the President, A. W. Fisk, in the chair. After calling the roll, the convention proceeded to the discussion of questions and receiving reports from members on wintering. Twenty-six members reported 688 colonies, fall count, and 469, spring count. Taking all together, the loss of the past winter will equal or exceed 80 per cent. in this part of the State.

Methods of wintering bees were next discussed. Mr. A. W. Fisk wintered his bees in the cellar, with burlap covers over the frames. Mr. H. H. Soul left his bees on the summer stands, in Quinby hives, with chaff over and at the sides of the frames. Mr. J. E. Stickle, Dr. J. A. James and E. F. Crane left their bees on the summer stands, unprotected. Mr. J. M. Hume uses a chaff hive, with quilts over the frames. Mr. H. W. Cummings left his bees on the summer stands, with outer case, packed with chaff, and chaff over the frames. Mr. Ed. Deyer wintered his bees on the summer stands packed in leaves. Mr. W. C. Cummings left his bees on the summer stands, with outer case and chaff packing. Jacob Hoover uses chaff packing on the summer stands. J. G. Norton uses chaff hives and chaff packing on the summer stands. Mr. N. M. Woodman left his bees on the summer stands, partly protected; spring dwindling and heavy losses were the result. Mr. Wm. Riley left his bees on the summer stands with upper and side packing. Mr. J. N. Bricker wintered part of his bees in the cellar and part on the summer stands; he prefers a cellar. Miss Cora Castle uses chaff packing on the summer stands.

The subject of queenless colonies was next discussed. Mr. J. M. Hume gives such a colony a frame of eggs and brood, and a queen or queen-cell. Mr. J. N. Bricker said that it did not pay to bother with such a colony in the spring. Mr. Wm. Riley gives them a frame of hatching brood, and in a few days a queen or a queen-cell.

Clipping queens' wings was also discussed, but it was thought by the Association that it was unwise and unprofitable.

The subject of comb foundation followed. Messrs. J. M. Hume, A. W. Fisk, J. N. Bricker, and Wm. Riley use full sheets in the sections and brood frames. J. G. Norton uses

half sheets in the sections and full sheets in the brood-frames. It was also the decision of the Association that an eight-frame hive was as good as a ten-frame one; also, that the Italian bees and the Langstroth hive were the best.

A vote of thanks were tendered the Macomb and Bushnell papers, and the AMERICAN BEE JOURNAL, for their kindness in announcing the meeting. Adjourned to meet at Macomb, Ills., on the second Thursday in October, 1885.

J. G. NORTON, *Sec.*

A. W. FISK, *Pres.*

Read at the International Congress.

Overstocking a Locality.

JOHN Y. DETWILER.

From numerous inquiries made by Northern apiarists, and also by conversation with visitors here from various localities in the North, I find the prevailing opinion is, that the mangrove district of Eastern Florida is now nearly, or quite, overstocked with apiaries. This opinion is almost universal in the North, and has been the means of keeping quite a number of individuals from engaging in honey production in this locality. The readers of several of the bee-papers have been informed from time to time that their is no further opportunity of engaging in bee-culture at this place without overstocking the locality, and they have been advised to seek the western coast to locate their apiaries. Having been engaged in apiculture in Northwestern Ohio for nearly ten years, and being familiar with both the white clover and basswood crops during a number of seasons, I think that I am free to say that nothing of the kind has ever come under my observation as the heavy flow of honey during the mangrove season is boundless. This is the principal honey crop of the coast, though there is honey gathered nearly every day in the year in small quantities.

Commencing on Jan. 1, the ash, maple, willow, and other forest trees yield a fair supply, and other trees and bushes which neither time nor space will allow me to enumerate. The saw-palmetto, previous to the mangrove, the cabbage afterward, and also various wild flowers during the entire winter months yield a scanty supply of honey, which, in many instances keeps up the stores of a colony. During April, feeding diluted honey in the open air is frequently resorted to in order to strengthen the colonies for the harvest of mangrove, which is due about June 10, when the honey season of the coast begins in good earnest, and continues with but little variation from 45 to 60 days; the season of 1884, according to my personal observation, was about 80 days.

The northern limit of the mangrove district is Port Orange, six miles south of Daytona, Volusia county, and about the same distance from Musquito Inlet. From the nothern limit, for a distance of 25 miles, there are innumerable islands ranging from a few square rods in area to many acres in extent, which, in the honey season, are covered with bloom, and secrete immense quantities of honey, sufficient, in my estimation, to supply thousands of colonies. When this fact is established beyond a doubt, I see no reason why energetic, industrious Northern apiarists should be advised to locate on the west coast, where, in my opinion, neither transportation nor the advantages which we possess are to be found.

I am told that the mangrove blooms profusely as far south as Indian River Narrows, but having had no opportunity to know by personal observation, I leave the matter as I have been informed. During spring and fall I do not doubt but what this locality can be overstocked; but while the mangrove yields honey so bountifully, what apiarist of experience will extract so closely, or sell his crop to the detriment of his bees and personal interests.

I take this opportunity to state to my fellow bee-keepers, and those who come to Florida to engage in apiculture, that they should come with the determination to withstand the disadvantages of a humid climate, insect pests, and high rates of transportation, as well as many other inconveniences unthought of in their Northern homes; on the other hand, a salubrious healthful climate, a total exemption from the rigors of winter, and the fact that neither winter losses nor "spring dwindling" discourage the apiarist. I would suggest to all who desire to change their locality, to first come and see before selling, and upon investigation decide whether the change will be for the benefit of all concerned. We should be pleased to welcome to our locality any apiarist, and impart any information in our power to advance their interests.

New Smyrna, ⊙ Fla.

For the American Bee Journal.

Bees Beneficial to Fruit, etc.

J. H. ANDRE.

Much has been written in regard to the destructiveness of bees in orchards, vineyards, etc. Now this would be well enough in its way, if we could have facts demonstrated by scientific experiments made by impartial investigation; but as such assertions are usually mere guess-work, it is an easy matter to bury them under an avalanche of opposing facts.

Within the last 25 years there have been, in this vicinity, four or five seasons when we had late frosts which killed nearly all of the fruit. During such seasons I observed many apples that were mixed with fruit of an entirely different color, and it was easily seen of what particular variety; in some instances the spots were small, and again, it would cover half the apple. Some would even give the flavor also. It was a mystery to me for some time, but I finally solved it in this way: The apples that were so mixed came from weak, late blossoms that lacked in pollen to make fruit, and which would never have produced fruit in a fruit-bearing season; but all of the early blossoms being chilled, the bees in their workings carried enough pollen from some late-blossoming variety to those weak blossoms, thus giving them stamina enough to produce fruit. The tree being freed from the earlier blossoms threw its strength to those hybrids, and produced fruit, which, in a fruit-bearing year, would have dropped from the tree. Thus in some seasons thousands of bushels of fruit are furnished us by the bees. It is quite likely that if the facts were known, this is of minor importance in comparison to the real benefit bees are aside from gathering honey.

I intend to try a colony this season, in a hive with 16 frames, 7x10, standing on their ends. Begin in one corner of the hive and stand up four frames; if they are Quinby frames one end will need be gained in the centre for passages. Now stand up four more with the sides at the ends of the first four, when it is finished. There will be four frames in each corner—one-half warm, the other cold frames. This will bring the brood-chamber outside of frames 14x14 inches square, and comb 10 inches high. With little trouble this could be used as a hanging frame hive, by putting two cross sticks across the hive, one each way. Each frame will occupy 1¼ inches space to make all correspond.

Lockwood, ♀ N. Y.

For the American Bee Journal

New Method of Transferring Bees.

O. CLUTE.

On page 228, in answer to the question, "What is the best method of transferring bees from box-hives?" several able bee-keepers reply that it is a good way to drum out the bees, put them into a new hive with frames of wired foundation, and then, 21 days later, drum out from the old hive all bees that have hatched in the meantime and unite them with the others.

Concerning this method of transferring, I wish to remark: 1. If the drumming out of the bees is at all thorough, there will not be enough of them left in the old hive to keep the capped brood warm, and all of it except what is just ready to hatch will chill and die. This is sure to be the case if the transferring is done in the cool weather of spring, or if there comes a cool time after the transferring, even when it is done in summer. This loss of capped brood is a serious objection to this method of transferring.

2. If the drumming out of the bees is thorough, there will not be enough of them left to feed and care for the uncapped brood, and hence it will chill, and starve, and die. If there was a good deal of brood in the old hive just on the point of hatching,

these newly hatched bees would do what they could to care for the growing brood; but in all ordinary cases they could not care for it all, and there would be a serious loss.

3. It may be said that the drumming is not intended to be so thorough, and that enough old bees are to be left in the old hive to care for all the brood, both capped and uncapped. But the gentlemen in giving directions say nothing about this, and the natural inference is that they expect that very few bees are to be left in the old hive, and yet that all the brood is to be taken care of until it comes to maturity. In this last, I am sure they will be mistaken.

A gentleman near Iowa City began bee-keeping a year ago. Last summer he followed the new method of transferring, and in a few days after he had drummed out the bees his old hives gave out a disgusting stench. On examination he found that this stench came from the large quantity of dead and putrid brood in the combs—brood that had chilled and died because there were not enough bees to warm and feed it. He is not to-day a very enthusiastic advocate of the new method. Will those who advise this method tell us how many colonies they themselves have transferred by it, at what season it was done, and how much brood they lost?

Iowa City, Iowa.

Read at the N. Y. State Convention.

The Honey Market.

L. C. ROOT.

The one great interest which comes before us most prominently, demanding the attention of all who are in any way interested in the production of honey, is, how shall we create a more general demand for our products and establish a permanent and well regulated market for the same? It may be well first to notice some of the causes which have brought about the present condition of the market, that we may be better able to work intelligently in placing it upon a better basis.

Twenty-five years ago, honey in boxes weighing from 5 to 10 pounds each, would wholesale readily at from 30 to 40 cents per pound, and retail in proportion. With this advantage, had the minds of bee-keepers generally been fixed upon the idea of establishing a reliable and permanent honey market, and had they worked as faithfully to that end as they have in the direction of producing a greater quantity of honey, we should not have the unsettled market of to-day. Besides, if we had kept this matter fully in mind in all of its bearings we should have found that by producing less surplus honey in better shape, we should have experienced far less loss, particularly in wintering. There are many who have lost in bees during the winter much more than they have gained by their efforts to produce a large amount of surplus.

I do not fail to recognize the grand progress which has been made during the past in the production of honey, and yet I repeat that far too little attention has been given to fostering and encouraging a demand for honey which would sustain a permanent and substantial market.

Now, in the direction of bringing about a needed reform, let me suggest that the one thing at which we should aim in an unselfish, thoughtful and energetic way is, a higher standard of our products. This, I believe, should be our motto. And our standard should be high; we should not be satisfied with anything less than the best. We should remember, that from the very earliest history of the world, honey has been considered a desirable article of food. We should also keep in mind the fact that it is the only entirely natural saccharine product that we have given us as a food. It is secreted in the blossom, gathered by the bees, and stored in the combs ready for our use, without undergoing any change or process of manufacture by man. When properly cured and kept under favorable conditions, it will not granulate.

To furnish this natural and desirable product with its delicious flavor pure and unchanged, whether in the comb, or freed from it, is the first and highest standard which can be placed before bee-keepers, and in my opinion will do more towards establishing permanency in a honey market than any other one thing.

It is very apparent that we have made great progress during these years, in neatness and form of package; and while this is true, it is also a fact that we have made many sad mistakes which have resulted harmfully. The honey-box of earlier date was glassed before it was filled, and, as a rule, was left upon the hive until late in the season. The effect of this was, that the boxes were thoroughly sealed with propolis. The honey was perfectly cured, and was covered with an extra coating over the capping of the cells, protecting it more entirely from moisture. If any cells were left partly filled and uncapped, the honey was removed by the bees.

With such products we should hear no complaints of honey dripping from the boxes, souring in the comb, or presenting a watery appearance. So long as we find honey offered for sale, partially sealed, produced without separators, without being glassed, improperly cured, and in leaky packages, we need not expect a substantial market. We must conform in some degree to the earlier methods. We must use separators to secure straight combs, be sure it is well sealed and firmly secured in the boxes, have it well cured, nicely glassed, and cased in a neat and substantial manner in a standard package.

One of the oldest and most reliable honey dealers in New York told me recently that much confusion arose from the irregularity in sizes of cases. The cases should never contain but one tier of boxes. Those for two-pound sections should hold twelve, and for one-pound sections, twenty boxes to the case.

Mohawk, N. Y.

L'Apiculteur.

The Caucasian Bee.

These questions were asked at the German Congress of Apiculture held at Erfurt: "Is the race of bees, recently introduced from the Caucasus, of any value whatever, viewed as a race to be reared?" "What other race would be particularly suitable for crossing?"

Mr. Hilbert, of Mariejewo, said that the State Reports of the Russian Counsellor, Dr. Butterow, having made known the Caucasian bee, he had procured through this gentleman, two queens direct from the Caucasus. A Mr. Gunther had also sent three more to him, so that he had commenced with 5 Caucasian queens. "Three words," he said, will indicate the value of this bee; viz., "gentle, lazy, and unprolific." He believed, however, that a cross with the Italian and Egyptian bees produced good results; though a cross with the Cyprian did still better; but he would not have only Cyprian bees to work for him, for their sting is abominable.

Mr. Vogel, of Lehmannshœfel, in the spring of 1879, had also received, through Dr. Butterow, 12 queens, which, by mistake, did not come direct from the Caucasus, but from the lower Don. The colonies, with their Caucasian queens, increased in strength wonderfully; in July the hives were crowded with bees, but—there was no honey. So gentle were they that in the warmest days he could not get them to sting him. They wintered well. In the summer of 1880, the product in honey was again naught; the hives were crowded again, in June and July, with brood and bees, but in the fall there was no honey—our season for honey-gathering ending with the harvest. This Caucasian bee being of no value for our country, he ceased to keep them. They may do very well, however, in regions where there is much honey to gather in the fall. In the summer of 1879, he again received through Dr. Butterow, 4 queens direct from Wladcawkas in the Caucasus; of these 4 queens, 2 did very well in 1880; their hives were populous, and very rich in honey. The colonies reared by him from these 2 queens, distinguished themselves also very advantageously. Again, in 1881, the Caucasian bee was remarkable, more than any other race, by its wealth of population and of honey.

Mr. Haus, of St. Petersburg, said that in the spring of 1879, Prof. Butterow had received from Caucasus, 21 queens, 12 of which were sent to Mr. Vogel. They were pure Caucasians, and did not come from the region of the lower Don, as Mr. Vogel supposed. These bees, though very active, do not always yield remarkable results; they are inclined to robbing. Their wintering lasts 218 days, after which they lay rapidly.

Mr. Lehzen, of Hanover, thought that this Caucasian bee demonstrates the correctness of an old assertion of his, namely, that we must utilize, something like the lever of our rearing, solely the power of the individual

of certain colonies, or rather of certain queens. He did not consider any single race as perfect; that the safety of apiculture did not depend upon the race, but that the value of any race was only individual. Mr. Hilbert appears somehow to have received bad Caucasian queens. He tells us that Caucasian bees reared in this country, like to sting; this he could admit, a different climate and some circumstances attending their gathering, cannot act with the rapidity of a thunderbolt upon the qualities of the bee, and instantaneously transform its character. All the pure Caucasian bees that he had reared, were as gentle and tractable as the original ones. The Caucasian queens, on the contrary, crossed with German drones, and hence not purely fecundated, produce, without exception, only bees of remarkable wickedness; here comes in Mr. Hilbert's observation.

He further remarked that the Caucasian bee has thus far wintered very well, being through all the winter as quiet as any other race; that it is singularly suitable for crossing; with the Italian it produces a bee still gentle, and of a very pure color. The most of his Caucasian bees, including the original ones—2 queens still living—are of the same color as the Italians. The greater part of the Caucasian workers have yet the little yellow crescent of the Cyprian bees. All the bees of Asia Minor present the same exterior peculiarities. If one considers the geographical dissemination of the honey-bees it must occur to him, as it did to Mr. Lehzen, that this Caucasian bee, the Cyprian and that of Asia Minor, all belong to secondary races, from a cross of our dark bee with the Egyptian.

Under all these considerations, therefore, he would say that no final judgment can yet be passed correctly upon the Caucasian bee, it having been with us only these two years, and so few in numbers. Every one knows that the product of a colony mostly depends upon the way it is treated; if colonies are frequently disturbed, they stop and sting and eat up their supply of honey; hence they are called wicked and lazy. Another will tend them carefully, giving them combs, will get a strong colony and produce honey; he will, of course, think very well of this race. Let us, therefore, wait a few more years before declaring our judgment upon the Caucasian bee.

Local Convention Directory.

1885.	*Time and place of Meeting.*
May 29.—	Haldimand, Ont., at Nelles' Corners, Ont. E. C. Campbell, Sec.
June 5.—	Mahoning Valley, at Newton Falls, O. E. W. Turner, Sec., Newton Falls, O.
June 19.—	Willamette Valley, at La Fayette, Oreg. E. J. Hadley, Sec.
July 15.—	Central Illinois, at Bloomington, Ills. Wm. B. Lawrence, Sec.
Dec. 8—10.—	Michigan State, at Detroit, Mich. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Joyful Hum of Busy Workers.—Ezra J. Cronkleton, Dunlap,-o Iowa, on May 15, 1885, writes thus:

I can report good success in wintering. I put 10 colonies into the cellar on Nov. 17, 1884, and took 10 out on April 12, 1885. They were nice, strong and clean, and all are now doing splendidly. The weather here has been cold, windy and bad in every particular until May 10, when it turned warm. Plum and apple bloom is opening some, and the joyful hum of the busy workers is heard again amidst the welcome bloom.

Late Season—Nuclei Colonies.—13—L. G. Purvis, (45—31), Forest City,-o Mo., on May 9, 1885, writes thus:

The fruit trees are in bloom again, although 3 weeks late, but bees are very scarce—about 90 per cent. having been lost during the past severe winter and spring, and two-thirds of those left are nothing more than nuclei, which will require a good deal of nursing to build them up into good colonies. I fared better than the majority of those having bees in this part of the country, as I have 31 left out of 40.

Report, from W. V. Whitney, Waucoma, ◊ Iowa, on May 14, 1885:

On Nov. 18, 1884, I put 98 rather light colonies into the cellar, and on April 1, 1885, I took out 83 colonies, 10 of which I have since lost, or doubled up, so that I now have 73 colonies in fair condition. The past has been a hard winter on bees, the most of the small apiaries having hibernated for good.

Expecting a Good Season.—J. G. Norton, Macomb,-o Ills., on May 18, 1885, writes thus:

Bees are "booming" on the fruit-bloom and getting ready to swarm. I look for a splendid year for bees in this locality.

White-Headed Drones, etc.—W. J. Davis, Youngsville,-o Pa., on May 19, 1885, says:

My bees are in splendid condition and doing very finely. I lost 12 colonies out of 200. I have a beautiful queen of last year that produces "white-headed" drones. I discovered them yesterday and enjoyed a hearty laugh at their comical appearance. Who among our fraternity has had experience with such oddities?

Prevention of Robbing by Hydropathic Treatment.—James T. Norton, Winsted,-o Conn., describes his method of preventing robbing, as follows:

In addition to the number of suggestions for the prevention of robbing in the apiary, given on page 276, I desire to give one which is very simple, and with me entirely successful in every instance. When robbing has commenced, I close the entrance to the assaulted hive so n arly that only a single bee can pass through at the same time, and this will, of course, make slow work for the robbers, which will gather in large numbers about the entrance. I then take a dish of the coldest water I can obtain, and with my hand sprinkle the bees heavily and rapidly, which will send such of them as can fly, to their homes in a hurry. It will not be long before another crowd will be on hand, and they will want the same treatment, as well as all subsequent gatherings. This plan is applicable to swarms which have been hived, and subsequently start to go off. Swarms should always be closely watched, after hiving, on that day, and for two or three subsequent days. Have a large sprinkler filled, and a bucket or two of water near at hand, and when the bees begin to come out, pour the water directly upon the hive-entrance, and the bees will be thoroughly wet, and unable to fly, and will cluster upon or under the hive, when they may be put back into the same, or what is better, another hive. I have never had a swarm make the second attempt to leave, after being subjected to the hydropathic treatment.

Report, from P. J. England, Fancy Prairie, ⊙ Ills., on May 13, 1885:

My apiary has been reduced from 44 colonies to 9 weak nuclei. They were wintered out-doors, and unprotected. It served me right.

Bees Wintered All Right.—W. A. Farris, Oil City,-o Pa., on May 16, 1885, writes thus:

I put 4 colonies into the cellar on Nov. 20, 1884, and they came through the winter all right. One died after I put them out, about April 1; caused principally by ignorant manipulation. Many colonies have died in this locality considering the number who keep bees, which is not many at most.

What Killed the Bees?—J. L. Pinkerton, Lebanon, ⊙ Mo., on May 18, 1885, writes as follows:

I commenced the winter with 52 colonies of Italian bees, and all did well until after the warm days about the first of February, when the most of them commenced rearing brood. From that time they commenced dying, and now I have but 4 colonies left. There was not more than 4 or 5 colonies that had the diarrhea; all had plenty of honey. In the fall they had free access to a cider mill near at hand, but I could not detect any fermentation in the honey of the cells of those that died. What killed them? I do not believe that it was the pollen, for they did not have a very great store of it. Others in the vicinity have shared a similar fate. We lost none that were in double-walled hives.

Moving Bees a Short Distance.—Dr. L. C. Whiting, East Saginaw, ⊙ Mich., writes as follows on this subject:

For moving colonies a short distance, Mr. Gallup, some years ago, gave an almost infallible plan. Shake the bees off the combs and let them cluster in some box for half an hour; remove the hive to the desired locality, and shake the bees in front of it, and run them in the same as a new swarm. A warm day should be taken to avoid chilling the brood.

Hives Full of Bees.—L. L. Triem, La Porte City, ⊙ Iowa, on May 21, 1885, writes as follows:

We are having a very cold and backward spring. To-day finds us in the midst of plum, dandelion, white willow, and other blooms, all coming together. Cold, cloudy weather has kept back the bloom of some of these that would have come before in ordinary spring weather. With all this bad weather I cannot see that the bees have lost much. All hives with good young queens are now crowded full of bees, and drones are very plentiful.

Special Notices.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

☞ **Preserve your papers** for reference If you have not got a Binder we will mail you one for 75 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview by sending the names to this office.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again."

☞ We want one number each of the BEE JOURNAL of August, 1866—February, 1867. Any one having them to spare will please send a Postal Card. We will pay 50 cents for one copy of each of the two numbers.

☞ For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail, postpaid.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Advertisements.